MEETINGS

In this department we hope to publish timely announcements of future meetings and reports of events and papers presented at past meetings. For this we rely on the organizers of meetings to send us announcements as early as possible, and on colleagues in each country to send us reports, avoiding duplication by checking with the editor or the nearest member of the International Commission.

1500TH BIRTH ANNIVERSARY OF ĀRYABHATA AT DELHI

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The 1500th Birth Anniversary of India's great astronomer and mathematician Āryabhaṭa I (born 476 A.D.) was celebrated at New Delhi on November 2-4, 1976 under the auspices of the Indian National Science Academy.

The celebration was inaugurated on November 2 by the Prime Minister Mrs. Indira Gandhi who urged the Indian scientists to strike beyond the "narrow ritual of restricting rational thinking to laboratories and lecture halls". She also released the following books: (i) The *Āryabhaṭīya* (of Āryabhaṭa I) critically edited with introduction, English translation and notes by K. S. Shukla in collaboration with K. V. Sarma. (ii) *Āryabhaṭiya* with the commentaries of Bhāskara I (629 A.D.) and Someśvara, critically edited with introduction and indexes by K. S. Shukla. (iii) *Āryabhaṭīya* with the commentary of Sūryadeva Yajvan, critically edited with introduction and indexes by K. V. Sarma. (iv) *Āryabhaṭa, Indian Mathematician and Astronomer* (5th Century A.D.), by K. S. Shukla. (v) *Āryabhaṭīya*, text in Sanskrit, Hindi translation, commentary, introduction etc. by R. N. Rai.

In a short lecture programme held under the Chairmanship of Dr. B. P. Pal, President of the Academy, the following two talks were given: (a) "Āryabhaṭa I: His methods and observation" by K. S. Shukla (Lucknow University). (b) "Moving reference systems in the *Āryabhaṭīya*" by W. Petri (Deutsches Museum, Munich).

The major and most important part of the 3-day function consisted of four scientific sessions each of which was devoted to a particular theme.

SESSION I: Life and Work of Āryabhaṭa I
Chairman: W. Petri
Co-chairman: F. C. Auluck (Delhi University)
Rapporteur: K. V. Sarma (Vishveshvaranand Institute)
1. "Āryabhaṭa and Creation of Decimal Place-value Numeration", by A. I. Volodarsky (Inst. of History of Science and Technology, Moscow).

2. "Glimpses from the *Āryabhaṭa-Siddhānta*", by K. S. Shukla.
3. "Āryabhaṭa as a Mathematician", by Ram Behari (Delhi).
4. "The Area of a triangle and the volume of a pyramid as well as the area of a circle and surface of the hemisphere in the mathematics of Āryabhaṭa I", by K. E. Elfering (University of Munich).
5. "On some mathematical rules from the *Āryabhaṭīya*", by R. C. Gupta (Birla Inst.).
6. "Āryabhaṭa I and Yativṛsabha, a study in *kalpa* and Meru", by L. C. Jain (S. N. College, Khandwa).

SESSION II: Astronomy and Mathematics at the Time of Āryabhaṭa in other Culture-areas (November 3)

Chairman: K. S. Shukla
Co-chairman: R. Billard (École française d'Extreme Orient)
Rapporteur: R. C. Gupta

7. "Greek contribution to the concept of probability as a pre-supposition for the development of a calculus of probability in the 17th century", by I. Schneider (Deutsches Museum).
8. "Newly discovered mathematical relations, between Greek and Indian astronomy", by R. P. Mercier (Southampton Univ.).
9. "Mesopotamian and Greek influence on Indian astronomy", by E. G. Forbes (University of Edinburgh).
10. "A comparative study of the mathematics Āryabhaṭa I and al-Khwārizmi", by S. M. R. Ansari (Aligarh Muslin Univ.).
11. "The Arabic Writers' knowledge of Āryabhaṭa's work", by M. S. Khan (Calcutta).
12. "On the geometrical interpretation of the negative root of an equation", by Yoshimasa Michiwaki (Gunma Univ.).

SESSION III: Āryabhaṭan School as well as Development of Indian Astronomy and Mathematics (November 3)

Chairman: E. G. Forbes
Co-chairman: Ram Behari
Rapporteur: Mrs. Bina Chatterji (Indian Inst. of Advanced Studies)

13. "Three types of Hindu sine tables", by Michio Yano (Kyoto Sangyo University).
14. "Āryabhaṭa and the Indian astronomy", by R. Billard.
15. "Tradition of *Āryabhaṭīya* in Kerala: revision of planetary parameters", by K. V. Sarma.
16. "State of Indian astronomy at the time of Āryabhaṭa", by M. L. Sharma (Sampurnanand Sanskrit University).
17. "Role of pre-Āryabhata Jaina School of astronomy in the development of siddhantic astronomy", by S. S. Lishk (who read it) and S. D. Sharma (both of Panjabi Univ.).
18. "Eclipses of the sun and moon according to Jaina astronomy", by J. C. Sikdar (L.D. Inst. of Indology).

19. "Manvantara theory and evolution of the solar system and Āryabhaṭa", by S. L. Dhani (Chandigarh).

The printed summaries of the following two papers were available although they were not read (as their authors were not present):

20. "Āryabhaṭa as he was known to later scholars", by A. K. Bag (Calcutta).

21. "Background to the discovery of the symbol of zero", by R. N. Mukherjee (Purnea College, Purnea).

A short talk on Indian astronomy was given by S. K. Chatterji (New Delhi).

SESSION IV: Science and Society in India in the Classical Period (November 4)

Chairman: D. S. Kothari (Delhi)

Rapporteur: B. V. Subbarayappa (assisted by R. C. Gupta)

22. "Āryabhaṭa and Lokāyatas", by G. M. Bongard Levin (Inst. of Oriental Studies, Moscow).

23. "Scientific attitude around the time of Āryabhaṭa", by O. P. Jaggi (Patel Chest Inst.).

A short talk on Indian realism was given by W. Petri.

Lively discussions were then held on various points of scientific interests. A suggestion for a group study of Āryabhaṭa was made by Bongard Levin.

The Concluding Session of the Celebrations was held in the afternoon of 4 November under the Chairmanship of Dr. D. S. Kothari, Ex-president of the Academy. Prof. F. C. Auluck, Chairman of the Organizing and Editorial Committees, pointed out the decisions of the National Commission on History of Science regarding the various schemes which formed part of the Celebrations. Short remarks were also made by E. G. Forbes (who is the Congress Secretary for the coming XV International History of Science Meet at Edinburgh in August 1977), Ram Behari, and Bongard Levin.

For the benefit of the general public, the leading local newspapers published relevant articles, of which the following two are of interest to historians of mathematics.

(A) "Āryabhaṭa, the Man and His Works", by R. N. Rai, published in the *Hindustan Times*, New Delhi Oct. 31, 1976.

(B) "Āryabhaṭa, India's Astronomer and Mathematician", by R. C. Gupta, published in the *National Herald*, New Delhi and Lucknow Nov. 7, 1976.

It is a matter of great satisfaction to the writer of this Report that most of his wishes about Āryabhaṭa celebrations and publications, expressed more than four years ago (vide *Notae de Historia Mathematica*, 2(2), Nov. 1972, p.9; etc.), have been fulfilled. It may be recalled that India's first artificial satellite, launched from a cosmodrome in U.S.S.R. on 19 April, 1975, was named ARYABHATA. Since then, a great interest is found in India not only in Āryabhaṭa I but in the history of science in general.